Owner's Guide

# Warm Air Tooth Dryer

a-dec®

85.0674.00

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| Warranty Information | |
|---|---|
| **Serial Number** | N/A |
| **Model Number** | N/A |
| **Date Purchased** | |

| Date of Service | Model/Description of Service | Technician's Initials |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

*For service information contact your local authorized A-dec dealer.*

*Check with local codes and A.D.A. (Americans with Disabilities Act) requirements for installation of this product.*

A-dec warrants its products against defects in material or workmanship for one year from time of delivery (except for handpieces which have a warranty period of six months). A-dec's sole obligation under the warranty is to provide parts for the repair, or at its option, to provide the replacement product (excluding labor). The buyer shall have no other remedy. (All special, incidental, and coincidental damages are excluded.) Written notice of breach of warranty must be given to A-dec within the warranty period. The warranty does not cover damage resulting from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from use of cleaning, disinfecting or sterilization chemicals and processes. The warranty also does not cover light bulbs. Failure to follow instructions provided in A-dec's Operation and Maintenance Instructions (Owner's Guide) may void the warranty.

NO OTHER WARRANTIES AS TO
MERCHANTABILITY OR OTHERWISE ARE MADE

a-dec®

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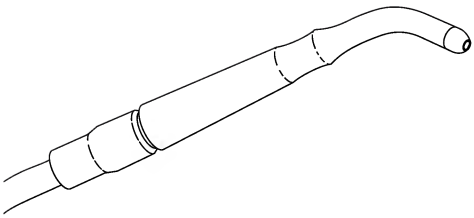

**Warm Air Tooth Dryer**

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# About Your Tooth Dryer

Your Tooth Dryer allows you to quickly prepare the tooth surface using warm, nearly dry air (the Tooth Dryer substantially reduces the moisture content of the air). The dryer is easy to use, and easy to maintain. It requires no electricity and has no moving parts. The dryer handle is thermally insulated for comfort and safety.

The Tooth Dryer operates under the principle of the Ranque-Hilsch tube *(see Figure 1)*, in which compressed air is passed through a vortex tube. As the compressed air passes through the tube it separates into two distinct swirling air streams – one warm, one cold. The warm air flows out gently from the tip orifice, while cold air is exhausted.

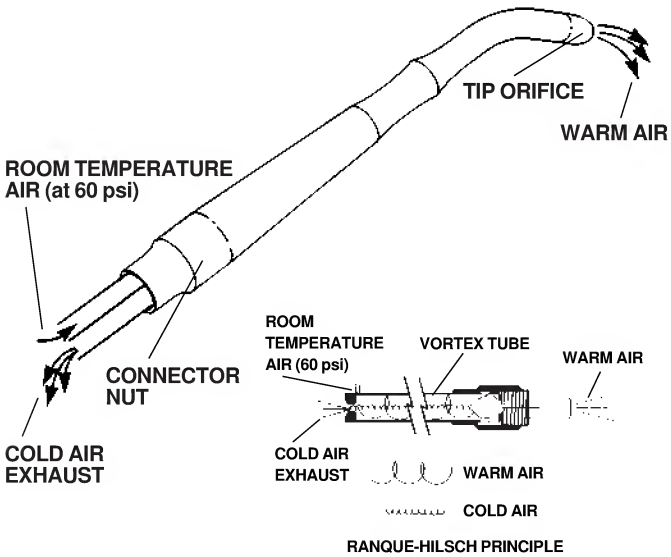


**Figure 1. Tooth Dryer Operating Principles**

# Operating Temperature

The Tooth Dryer is designed to deliver warm air at a temperature of between 125°F (51.7°C) and 135°F (57°C) when the air pressure at the Tooth Dryer is 60 psi. This temperature is present *only at the tip orifice*, and will decrease rapidly as you increase the distance between the tip orifice and the work surface *(see Figure 2)*. Thus, drying temperature is regulated by altering the distance between the tip orifice and the work surface.

The tooth dryer air temperature will be affected by changes in air pressure: an increase in air pressure will cause an increase in temperature; likewise, a decrease in air pressure will cause a decrease in temperature. Be aware that the handpiece pressure gauge on the control system indicates Tooth Dryer air pressure.

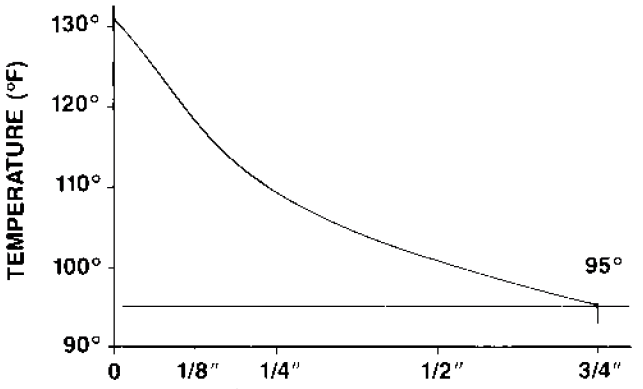


**Figure 2. Temperature vs. Distance From Tip**



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# Tubing Considerations

**Never connect the dryer to tubing previously used with a dental handpiece.** Oil residues in the handpiece tubing will contaminate the dryer internally which may reduce or block air flow. Additionally, oil residues blowing out of the dryer may seriously contaminate the work surface.

If you suspect that the Tooth Dryer has been contaminated internally with oil residue, remove the dryer from the handpiece tubing then, while holding the dryer over a sink, pan, or towel, use an electronics degreaser to flush it out. Spray the cleaner into the exhaust air port *(see Figure 3)* for 5 to 10 seconds, then shake the instrument to force out any remaining degreaser. The instrument will air dry within several minutes. If it is necessary to use the instrument immediately after cleaning, dry it out on its own dedicated handpiece tubing by operating for 10 to 15 seconds before using.

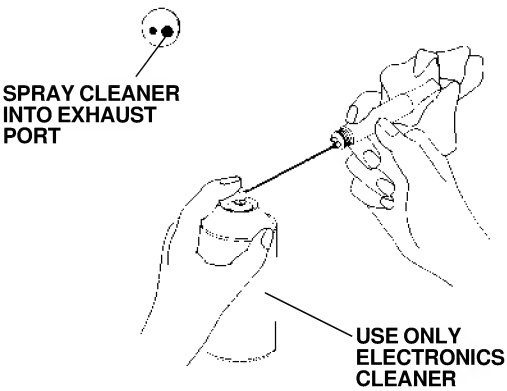


**Figure 3. Internal Cleaning**

# Care Instructions

1. Clean the exterior of the tooth dryer.

### *Caution*

Handpiece cleaning solutions which is not corrosive to aluminum **(check the product label before using)*** may be used to wipe the external surfaces of the Tooth Dryer. However, do not allow cleaning solution to enter the dryer via its tip orifice or air supply and exhaust ports. Cleaning solution may become trapped internally causing blockage of air flow by dried solution, and even internal corrosion. If you suspect that the dryer has cleaning solution trapped internally, follow the flushing instructions on page 3. To prevent corrosion of the instrument's connecting threads by trapped cleaning solution, remove the dryer from its handpiece tubing before wiping.

Do not use dry heat sterilization and do not allow temperatures to rise above 275°F (135°C).

### *Important Note**

Avoid bleach and peroxides. Be sure to thoroughly remove all cleaning solutions.

2. For recommended asepsis instructions refer to your **Equipment Asepsis Owner's Guide**, *A-dec Publication No. 85.0696.00.*

# Adjustments

## Adjust The Tooth Dryer Air Temperature

The handpiece pressure gauge on the control head indicates the tooth dryer air pressure. To adjust the temperature of the warm air produced by the Tooth Dryer: Using a $^{3}/_{32}$-inch hex key, turn the air temperature adjustment screw *(see Figure 4)*. The handpiece pressure gauge should be at 60 psi when the tooth dryer is operating.

### *Important Note*

Do not turn the screw counterclockwise beyond the point where the air pressure stops increasing. It is possible for the screw to come completely out of the control block.

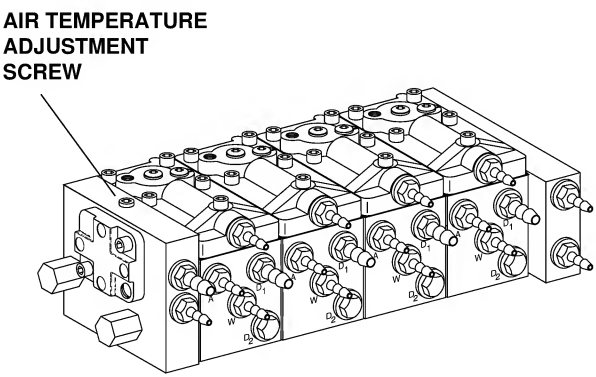


**Figure 4. Adjusting the Air Temperature**

# Repair Information

Any problem that does arise will probably be related to a change in air pressure to the instrument. If you suspect that the Tooth Dryer is not functioning properly, consult your authorized A-dec dealer.

### *Important Note*

The Tooth Dryer contains no field or user serviceable parts. Do not attempt to take the dryer apart, doing so may disturb the internal calibration and result in improper operation.

**Attempts to disassemble or service the Tooth Dryer will void the warranty.**

# Adjustments and Specifications

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# Maintenance

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***Specifications are subject to change without notice.***

# Identification of Symbols

Recognized by Underwriters Laboratories Inc. ® with respect to electric shock, fire and mechanical hazards only in accordance with UL 2601-1. Recognized with respect to electric shock, fire, mechanical and other specified hazards only in accordance with CAN/CSA C22.2, No. 601.1.

UL listed to US (UL 544) and Canadian (CAN/CSA C22.2, No. 125) safety standards.

Classified by Underwriters Laboratories Inc. ® with respect to electric shock, fire and mechanical hazards only in accordance with UL 2601-1. Classified with respect to electric shock, fire, mechanical and other specified hazards only in accordance with CAN/CSA C22.2, No. 601.1.

Conforms to European Directives *(refer to Declaration Statement)*

Protective earth (ground).

Functional earth (ground).

Attention, consult accompanying documents.

TYPE B APPLIED PART.

CLASS II EQUIPMENT.

# Classification of Equipment (EN 60601-1)

**Type of shock protection:**
CLASS I EQUIPMENT
(Dental Chairs, Dental Lights, & Power Supplies)
CLASS II EQUIPMENT
(Chair, Wall, & Cart Mounted Delivery Systems)

**Degree of shock protection:**
TYPE B APPLIED PART (All products)

**Degree of protection against water ingress:**
ORDINARY EQUIPMENT (All products)

**Mode of operation**
CONTINUOUS OPERATION
(All models except Dental Chairs)

**Mode of operation**
CONTINUOUS OPERATION
WITH INTERMITTENT LOADING (Dental Chairs)

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